

REMARKS

This Amendment is filed in response to the Office Action dated December 27, 2006, which has a shortened statutory period set to expire March 27, 2007.

Claims 1-12, 17-26, 31-33, and 38-45 Are Patentable Over Cohen

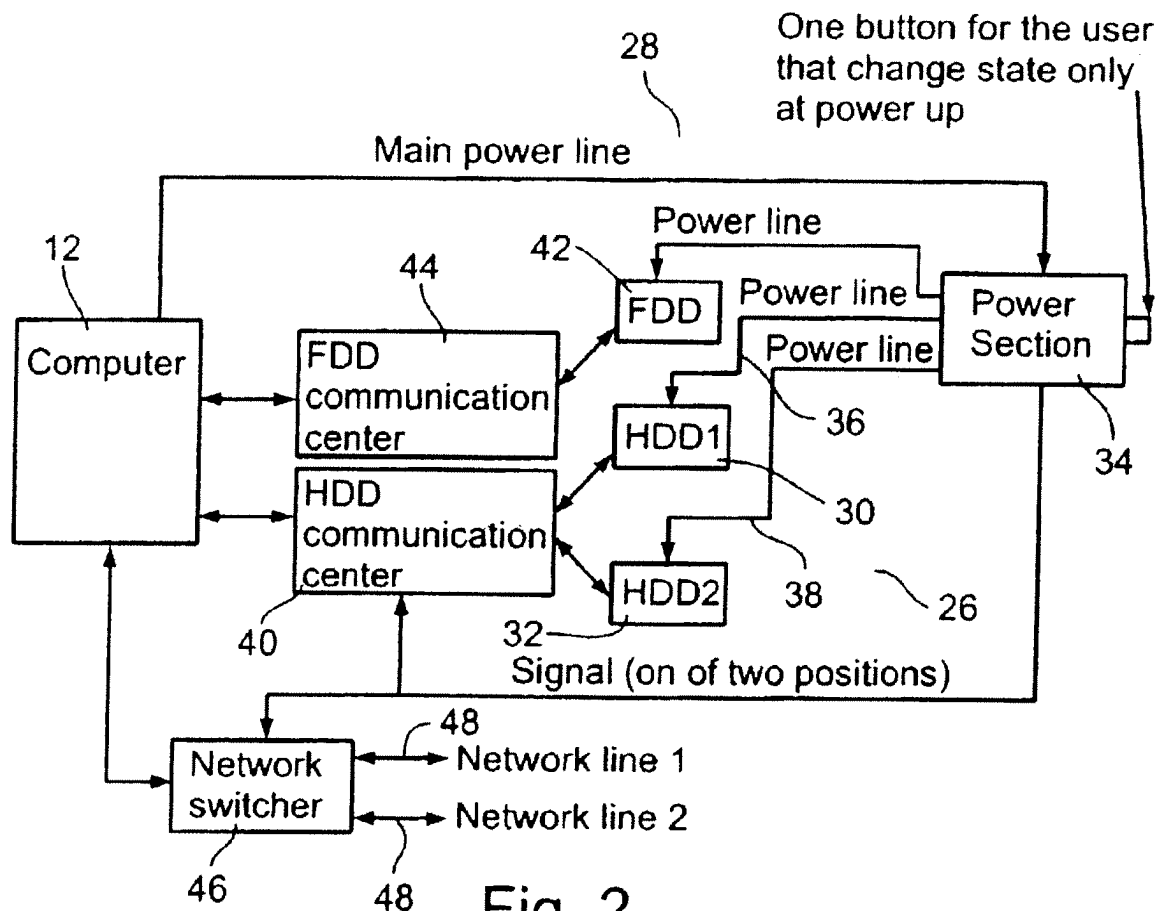
Claim 1, as amended, recites (emphasis added):

notifying an **intelligent** endpoint of a boot event for a computer system, the intelligent endpoint being connected to one of the computer systems, wherein the intelligent endpoint is a peripheral device; and

deciding on an action for the boot event using the intelligent endpoint, wherein deciding includes **determining whether the action affects or depends on a boot of another computer system**.

Applicant respectfully submits that Cohen fails to teach the recited intelligent endpoint. For convenience, Applicant has shown Fig. 2 below for ease of reference.

Cohen teaches that a power supply 34 acts as the main switch that chooses the boot state of a computational device 12, wherein one state is assigned to a hard disk drive 30 and another state is assigned to a hard disk drive 32. Col. 7, lines 1-5. Each of hard disk drives 30 and 32 has a separate operating system for computational device 12. Col. 7, lines 12-14. According to Cohen, when a user powers up computational device 12, it enters one of two states (i.e. in state (1), hard drive 30, network line 1, and floppy disk drive (FDD) 42 are connected, whereas in state (2), hard drive 32 and network line 2 are connected (and FDD 42 is not connected)). Col. 7, lines 38-46. To change to another state, the user turns off computational device 12 and then powers on computational device 12 while holding the state changing button of hardware boot management device 26. Col. 7, lines 46-52.



In contrast, as taught by Applicant in paragraph [0011], an intelligent endpoint can provide an automated, centralized boot management for multiple, interconnected computer systems. This intelligent endpoint can advantageously resolve arbitration issues in a cost- and size-efficient manner. Moreover, the intelligent endpoint can provide significant flexibility during booting to enforce the most desirable policies.

For convenience, Figures 1 and 2 of the present application are shown below. Figure 1 illustrates an exemplary PCI Express system that includes two computer systems, wherein each computer

system is coupled to a plurality of peripherals, called endpoints. Paragraph 0006.

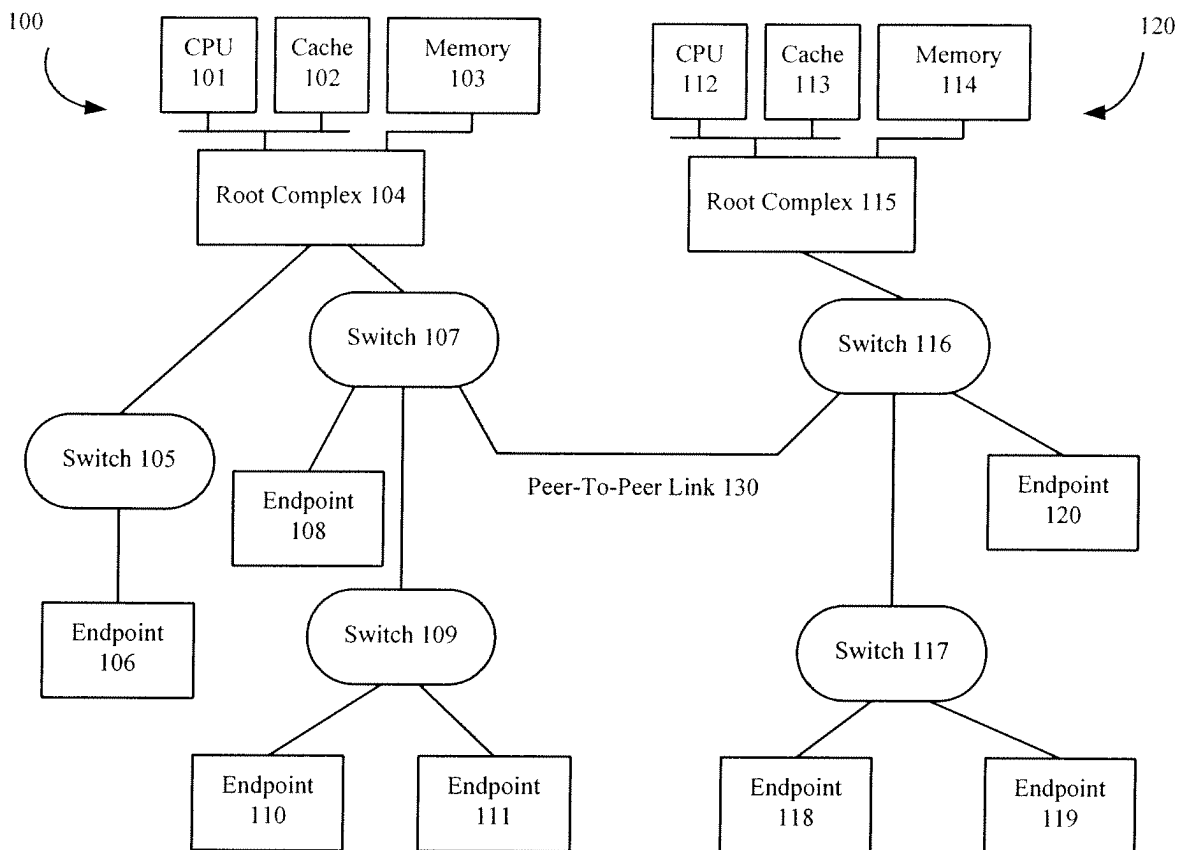


Figure 1

A first computer system 100 includes a CPU 101, a cache 102, and a platform memory 103. Paragraph 0006. A second computer system 120 includes a CPU 112, a cache 113, and a platform memory 114. Paragraph 0006. For root complex 104 (i.e. the "root" of the connection of an I/O system of computer 101 to its memory 103), a switch 105 can direct traffic to/from endpoint 106, a switch 107 can direct traffic to/from endpoint 108, and switches 107 and 109 can direct traffic to/from endpoints 110 and 111. Paragraphs 0007, 0009. Similarly, for root complex 115, a switch 116 can direct traffic to/from endpoint 120 and switches 116 and 117 can direct traffic to/from endpoints 118 and 119. Paragraph 0009. In Figure 1, a peer-to-

peer link 130 can also be established between switches 107 and 116, thereby supporting transactions between hierarchy domains. Paragraph 0009. These endpoints, switches, and peer-to-peer link form the "fabric" of the computer systems. Paragraph 0009.

In accordance with one aspect of the invention, the intelligent endpoint can leverage the "fabric", i.e. a peer-to-peer link, to provide boot coordination between connected computer systems. Paragraph 0037. Advantageously, this boot coordination can be accomplished without substantial price and/or performance penalties. Paragraph 0037.

In one embodiment, which conforms to protocols in PCI Express, a preliminary boot of each system can be completed. Paragraph 0038. This preliminary boot can include an acknowledgement and configuration of each endpoint associated with its computer system. Paragraph 0038. Thus, after completion of the preliminary boot and referring back to Figure 1 for illustration, computer system 100 would acknowledge and configure endpoints 106, 108, 110, 111, whereas computer system 120 would acknowledge and configure endpoints 118, 119, and 120. Paragraph 0038. Both computer systems 110 and 120 would note peer-to-peer link 130. Paragraph 0038. At this point, the intelligent endpoint, which could be one of endpoints 106, 108, 110, 111, 118, 119, and 120, can be activated. Paragraph 0038. The coordination that the intelligent endpoint can provide may include one or more functions controlling arbitration, security, timing, and overriding policies. Paragraph 0038.

Figure 2A illustrates a simplified computer system 200 including a first booting platform 201A, a second booting platform 201B, and an intelligent endpoint 206. Paragraph 0045. Booting platform 201A can include the same components as booting platform 201B. Paragraph 0045. Booting platform 201A and 201B can be coupled to intelligent endpoint 206 using a fabric 207.

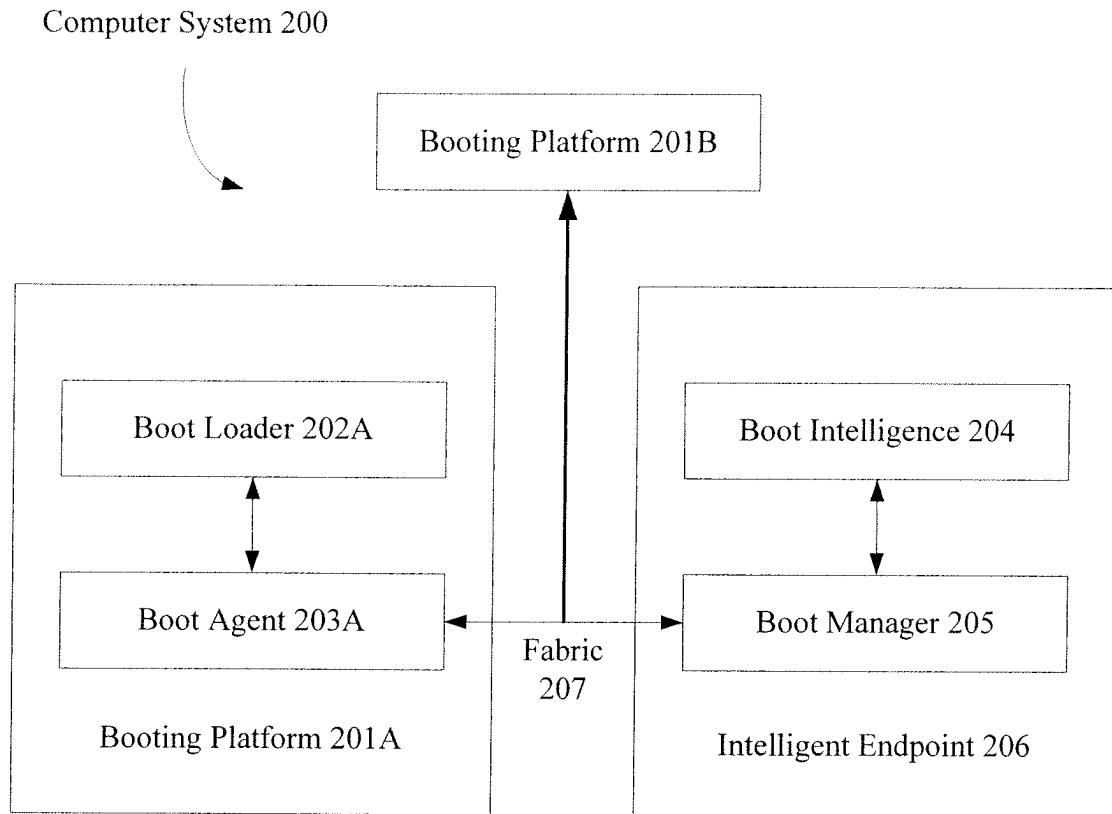


Figure 2A

In accordance with one aspect of the invention, intelligent endpoint 206 can include a boot manager 205, which can use boot intelligence 204 to assist booting platform 201A in the boot. Paragraph 0046. A boot agent 203A can provide an interface for booting platform 201A to communicate with boot manager 205. Paragraph 0046. In one embodiment, once the computer is turned on and a preliminary boot is complete, boot loader 202 can communicate with boot manager 205 (via boot agent 203) and request assistance in the boot. Paragraph 0046.

Referring to Claim 1, Applicant's method can perform boots for multiple, interconnected computer systems. Cohen fails to

disclose or suggest multiple, interconnected computer systems. Moreover, Applicant's intelligent endpoint can advantageously determine whether an action for the boot event affects or depends on a boot of another computer system. Cohen also fails to disclose or suggest this recited step of the intelligent endpoint. Because Cohen fails to disclose or suggest multiple limitations of Claim 1, Applicant requests reconsideration and withdrawal of the rejection of Claim 1.

Claims 2-12 depend from Claim 1 and therefore are patentable for at least the reasons presented for Claim 1. Based on those reasons, Applicant requests reconsideration and withdrawal of the rejection of Claims 2-12.

Claim 17, as amended, recites (emphasis added):

a boot manager for assisting a booting platform of **each of the computer systems via the fabric, the fabric including at least one peer-to-peer link**; and boot intelligence for **storing information regarding boots of the computer systems**, wherein the boot manager and the boot intelligence form a peripheral device.

Applicant respectfully submits that Cohen fails to teach the recited boot manager and boot intelligence of the intelligent endpoint. Specifically, Cohen fails to disclose or suggest multiple computer systems and thus cannot logically teach a boot manager that assists in the booting platform of each computer system, i.e. via the fabric that includes at least one peer-to-peer link. Moreover, the power section 34, which provide switching capability to a user, does not store information regarding the boots. Because Cohen fails to disclose multiple limitations of Claim 17, Applicant requests reconsideration and withdrawal of the rejection of Claim 17.

Claims 18-26 depend from Claim 17 and therefore are patentable for at least the reasons presented for Claim 17.

Based on those reasons, Applicant requests reconsideration and withdrawal of the rejection of Claims 18-26.

Claim 33, as amended, recites in part (emphasis added):

an intelligent endpoint operatively coupled to the computer via **a system fabric**, the intelligent endpoint managing at least a portion of a boot of the computer, wherein the intelligent endpoint is a peripheral device, ...

wherein the intelligent endpoint includes:

a boot manager for communicating with the boot agent across the system fabric; and

boot intelligence for storing information regarding a boot of the computer system, the boot manager communicating with the boot intelligence, wherein the boot intelligence includes at least one of a plurality of startup sequences, secret keys, and administrative keys.

Therefore, Claim 33 is patentable for at least the reasons presented for Claims 1 and 17. Moreover, Cohen fails to disclose or suggest that power section 34 can store information regarding startup sequences, secret keys, or administrative keys. Based on these reasons, Applicant requests reconsideration and withdrawal of the rejection of Claim 33.

Claims 38-45 depend from Claim 33 and therefore are patentable for at least the reasons presented for Claim 33. Based on those reasons, Applicant requests reconsideration and withdrawal of the rejection of Claims 38-45.

Claims 13 and 27 Are Patentable Over Cohen And Cromer

Claims 13 and 27 depend from Claims 1 and 17, respectively, and therefore are patentable for at least the reasons presented for Claims 1 and 17. Cromer fails to remedy the deficiency of Cohen with respect to Claims 1 and 17. Specifically, Cromer fails to teach the recited intelligent endpoint. Because both Cohen and Cromer fail to disclose or suggest the recited

intelligent endpoint, Applicant requests reconsideration and withdrawal of the rejection of Claims 13 and 27.

Claims 14, 28, And 35 Are Patentable Over Cohen And Yoon

Claims 14, 28, and 35 depend from Claims 1, 17, and 31, respectively, and therefore are patentable for at least the reasons presented for Claims 1, 17, and 31. Cromer fails to remedy the deficiency of Cohen with respect to Claims 1, 17, and 31. Specifically, Cromer fails to teach the recited intelligent endpoint. Because both Cohen and Cromer fail to disclose or suggest the recited intelligent endpoint, Applicant requests reconsideration and withdrawal of the rejection of Claims 14, 28, and 35.

Claims 15, 29, And 36 Are Patentable Over Cohen And Davis

Claims 15, 29, and 36 depend from Claims 1, 17, and 31, respectively, and therefore are patentable for at least the reasons presented for Claims 1, 17, and 31. Cromer fails to remedy the deficiency of Cohen with respect to Claims 1, 17, and 31. Specifically, Cromer fails to teach the recited intelligent endpoint. Because both Cohen and Cromer fail to disclose or suggest the recited intelligent endpoint, Applicant requests reconsideration and withdrawal of the rejection of Claims 15, 29, and 36.

Claims 16, 30, And 37 Are Patentable Over Cohen And James

Claims 16, 30, and 37 depend from Claims 1, 17, and 31, respectively, and therefore are patentable for at least the reasons presented for Claims 1, 17, and 31. Cromer fails to remedy the deficiency of Cohen with respect to Claims 1, 17, and 31. Specifically, Cromer fails to teach the recited intelligent endpoint. Because both Cohen and Cromer fail to disclose or

suggest the recited intelligent endpoint, Applicant requests reconsideration and withdrawal of the rejection of Claims 16, 30, and 37.

Applicant Requests Entry Of Amended Figure 1

Figure 1 is objected to because it is not labeled prior art. Applicant respectfully request entry of Figure 1 submitted herewith and labeled "Prior Art". Therefore, Applicant requests reconsideration and withdrawal of the objection to Figure 1.

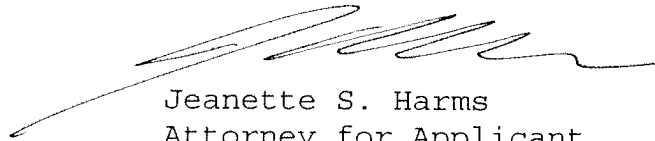
CONCLUSION

Claims 1-30, 33, and 35-45 are pending in the present application. Allowance of these claims is respectfully requested.

If there are any questions, please telephone the undersigned at 408-451-5907 to expedite prosecution of this case.

Respectfully submitted,

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